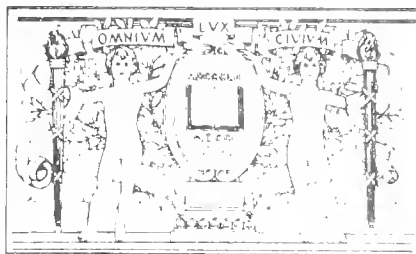


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Exhibit B-1

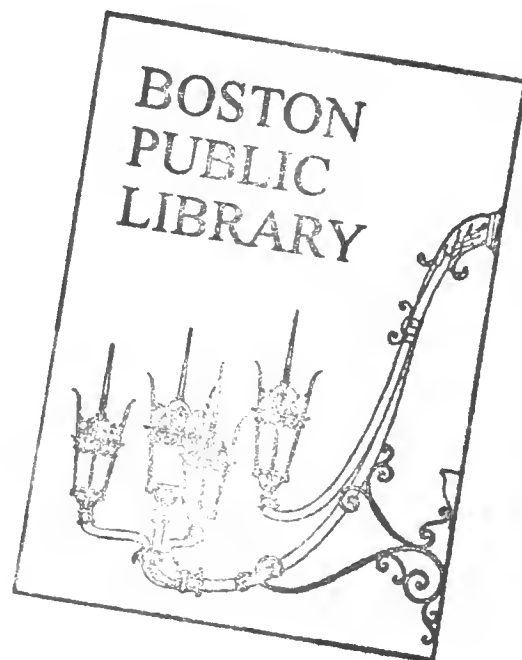
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Proposal for  
Subsurface Investigation,  
Geotechnical Engineering Services,  
and  
Environmental Site Assessment

CHINATOWN PARCELS A, B, AND C  
Boston, MA

August 31, 1989

Ref. File 442-89



PREPARED FOR:

Asian Community Development Corp.  
360-B Tremont Street  
Boston, MA 02116

PREPARED BY:

Miller Engineering, Inc.  
P.O. Box 4776  
Manchester, NH 03108

1-7 110000



# MILLER ENGINEERING, INC.

100 SHEFFIELD ROAD • P.O. BOX 4776 • MANCHESTER, NEW HAMPSHIRE 03108 • TELEPHONE (603) 668-6016  
GEOTECHNICAL / SOIL BORINGS / CONCRETE / STEEL / ROOFING / ASPHALT INSPECTION

August 31, 1989

Ms. Regina Lee  
Executive Director  
ASIAN COMMUNITY DEVELOPMENT CORPORATION  
360-B Tremont Street  
Boston, MA 02116

Re: Geotechnical Engineering Services and  
21-E Environmental Site Assessment  
Chinatown Parcels A, B, and C  
Boston, MA

Ref. File 442-89

Dear Ms. Lee:

In response to your letter dated August 18, 1989, Miller Engineering & Testing, Inc. (MET) is pleased to submit this proposal for Geotechnical Engineering and Environmental Site Assessment services for the above referenced project.

In preparation of this proposal, we have visited the site and researched the subsurface conditions prevalent in the immediate area, to define the scope of services in terms of boring depth requirements and site accessibility. Based upon our research, we anticipate fill potentially underlain by organic deposits to depths of 10 to 20 feet. Medium stiff to soft clays will underlie the organic deposits and fill for depths of up to 100 feet or more prior to encountering dense granular deposits and/or bedrock. Due to these conditions, undisturbed Shelby tube sampling techniques in the clayey soils, to facilitate laboratory strength and consolidation testing, and rock core will be required to define the subsurface conditions.



It is our understanding that three (3) separate development projects are planned in close proximity to each other in the Chinatown section of Boston. The sites are within land parcels bordered by Washington Street and Harrison Avenue to the west and east, respectively; and Marginal Way and Nassau Street to the south and north, respectively.

Parcel A is the southernmost development located at the corner of Marginal Way and Washington Street. This development is to consist of low rise row houses and 12 and 18 story towers with provisions for underground parking on two (2) or three (3) levels anticipated. The development is sponsored by the Chinese Economic Development Council.

The Parcel B development is located directly adjacent and north of Parcel A, and is sponsored by the Asian Community Development Council. Buildings ranging in height from 4 to 18 stories will be constructed on the site. Underground parking on one or two levels is anticipated.

The Parcel C development is located northeast of Parcel B between Ash Street and Harrison Avenue and Oak and Nassau Streets. Parcelization and Architect selection has not been finalized; however, a 100,000 square foot community center facility is planned in this area. This project is sponsored by a coalition of social service groups in Chinatown.

It is our understanding that each parcel project will be sponsored by a different client; therefore, we anticipate preparation of separate geotechnical and site assessment reports. The fieldwork would, however, be most economical if it could be performed concurrently, which would eliminate costs associated with re-mobilization.

The scope of services is described in detail below followed by a fee schedule presented separately for each parcel.





## Subsurface Exploration

Utilizing our in-house drilling equipment, we propose a total of nine (9) borings (three [3] on each parcel) to depths of approximately 100 feet at the locations shown on the attached Proposed Boring Location Plan. The actual depth of each borehole will be determined in the field by our resident engineer.

Drilling and sampling will be in accordance with all current applicable ASTM and professional standards. Where clayey, cohesive soils are encountered, thin-walled tube samples will be taken. Split-spoon samples will be taken at representative strata. Samples will be placed in sealed jars and labeled showing the boring number, sample number, sample depth, number of blows per six-inch increment required to drive the split spoon sampler, date, project name and engineer's name. Rock core will be obtained in one (1) borehole from each parcel and placed in core boxes properly labeled as indicated above. In addition, field vane shear tests will be performed to correlate laboratory-determined shear strength parameters if deemed appropriate in the cohesive strata.

You will be notified before the drilling equipment is removed from the site as to subsurface conditions encountered. Utility companies (i.e., Dig-Safe) will be contacted prior to drilling. Drill holes will be backfilled and patching of pavement will be done prior to leaving the site.

All borings will be located, and performed under the full-time direction, of a resident geotechnical engineer.

Groundwater monitoring wells will be installed in a total of three (3) borings (one [1] on each site) to obtain accurate water level readings and to facilitate groundwater sampling for the environmental site assessment. The well material will be steam cleaned in accordance with standard environmental practice and street box



locking caps will be installed over the wells for protection.

### Laboratory Testing and Geotechnical Engineering Report

Based upon the results of the subsurface exploration program, a geotechnical laboratory testing program will be established. Presently, we anticipate performance of the following tests on cohesive soil samples:

- 3 - Consolidation Tests
- 3 - Unconsolidated, Undrained Triaxial Shear Tests
- 10 - Atterberg Limit Determinations
- 10 - Water Content Determinations

The results of the subsurface exploration and laboratory testing program will be interpreted and summarized in the form of geotechnical engineering report. The engineering evaluation will focus on all viable foundation types, pointing out the advantages and disadvantages of each and the potential for use of multiple types of foundation systems within one parcel as well as the potential need to integrate foundation types with those proposed for other parcels. The report will address a variety of foundation types including, but not limited to, the following:

1. Pile Foundations
  - a. Friction Piles
  - b. End Bearing Piles
2. Mat Foundation Systems
3. Spread Footings (if appropriate for smaller buildings)

In addition, an inventory of adjacent existing building foundation systems will be performed to assess the impact of deep excavation (for parking structures) and foundation and construction activities, will have on these structures. Design guidelines for temporary excavation support and de-watering systems will be presented.



### Design Assistance Services

Miller Engineering, Inc. will be available to work closely with the architects and structural engineers during preparation of working drawings and construction specifications. This service will insure that proper integration of the geotechnical requirements has been incorporated into these documents for design and construction and that compliance with the Massachusetts State Building Code has been achieved.

### Environmental Site Assessment

An environmental site assessment (ESA) will be conducted to determine if there is evidence of oil or hazardous materials on-site which could pose a liability under Massachusetts General Law Chapter 21-E. Soil and groundwater samples for the ESA will be collected from borings and monitoring wells installed during the geotechnical engineering site investigation.

Soil samples, which will be analyzed for total Petroleum Hydrocarbons (TPH), will be retrieved from five feet deep in each boring. Groundwater samples will be collected from one monitoring well on each site, and analyzed for Volatile Organic Compounds (VOC) with EPA Method 624.

A report will be submitted including a site ownership and usage history, environmental review of the local area, and methods and results of the field investigations and sample analyses. An environmental evaluation will be included describing the likelihood of a liability under MGL Chapter 21-E.

A budget has been prepared based upon the scope of work outlined above, separately for each parcel.



PARCEL A:

I. Field Exploration

Furnish all equipment, drill crew, field engineer, 5'-0" of rock core, well materials with locking cap, and perform all work described above \$ 15,080.00

II. Geotechnical Laboratory Testing \$ 1,280.00

III. Geotechnical Engineering Report \$ 6,500.00

IV. Geotechnical Design Assistance  
Estimated at 60 hours @ \$65.00 per hour \$ 3,900.00

V. Environmental Site Assessment \$ 3,375.00

Total (Parcel A) \$ 30,135.00

PARCEL B:

I. Field Exploration

Furnish all equipment, drill crew, field engineer, 5'-0" of rock core, well materials with locking cap, and perform all work described above \$ 15,080.00

II. Geotechnical Laboratory Testing \$ 1,280.00

III. Geotechnical Engineering Report \$ 6,500.00

IV. Geotechnical Design Assistance  
Estimated at 60 hours @ \$65.00 per hour \$ 3,900.00

V. Environmental Site Assessment \$ 3,375.00

Total (Parcel B) \$ 30,135.00





PARCEL C:

I. Field Exploration

Furnish all equipment, drill crew, field engineer, 5'-0" of rock core, well materials with locking street box, police detail in City street and perform all work described above

\$ 16,180.00

II. Geotechnical Laboratory Testing

\$ 1,280.00

III. Geotechnical Engineering Report

\$ 6,500.00

IV. Geotechnical Design Assistance

Estimated at 60 hours @ \$65.00 per hour

\$ 3,900.00

V. Environmental Site Assessment

\$ 3,375.00

Total (Parcel A) \$ 31,235.00

It should be noted that these prices include one mobilization and demobilization charge for drilling services. Therefore, if each parcel must be drilled at separate times requiring remobilization, prices will be increased proportionally for each parcel.

With reference to the Professional Liability Insurance requirement within your request for proposal, please be advised that our current limit is \$250,000.00 with a \$25,000.00 deductible for each claim. We can purchase a rider to obtain \$1,000,000.00 coverage; however, the cost for this additional amount is quite expensive and would be reflected in our costs for services for this project. We trust that this item could be negotiated should the balance of this proposal be acceptable.



The following is brief synopsis of our company history, qualifications and experience which we trust will assist you in your selection of a consultant for this project:

Miller Engineering, Inc., founded in 1976, is an organization of approximately 85 professionals and support staff representing the field of hydrology, geology and geophysics, geotechnical and structural engineering, and materials testing. As one of New England's original geotechnical engineering firms, Miller Engineering, Inc. has over 13 years of progressive experience while conducting over 4,000 projects throughout the region.

Corporate headquarters are located in Manchester, New Hampshire with branch offices in Auburn, Maine and Northboro, Massachusetts. Each office is staffed with professional engineers and certified technicians, and is fully equipped with modern geotechnical testing equipment for performing field and laboratory investigations. In addition, the corporate headquarters office is equipped with a full range of environmental test equipment.

Our geotechnical engineering and environmental services departments are fully supported by in-house testing and drilling departments. Drilling equipment includes two and four-wheel drive truck-mounted rigs, all terrain track-mounted vehicles, and portable equipment capable of drilling, sampling, and installing monitoring wells to depths greater than 100 feet in unconsolidated sediments or bedrock. The drill rigs can be equipped for obtaining undisturbed soil samples, and rock cores, or for performing various in situ subsurface tests. Our geotechnical laboratory testing services include triaxial cell compression, consolidation, and permeability testing for use in foundation, slope and landfill studies. Our in-house subsurface exploration and testing capabilities eliminates the subcontracting of these services, thus retaining total control over scheduling, quality assurance, and management cost.



Our firm has performed geotechnical studies on many sites throughout the New England area for State agencies, municipalities and private industry. We have extensive experience in addressing a variety of soil conditions and a thorough knowledge of the typical properties of soils generally encountered throughout the area. We have developed foundation recommendations for the design of numerous deep and shallow foundation systems for buildings, tanks, towers, etc., and have provided field support during their construction.

Field engineers and drilling personnel have completed the OSHA 1910.120 40-hour Hazardous Waste Site Operations and Methods Course and have all necessary protective clothing and equipment through Level B.

We have extensive experience in the planning and implementation of hazardous waste management (HWM) programs for State, municipalities and industry. Studies have included environmental assessment and remediation of hazardous material migrating from CERCLA (Superfund) sites, underground storage tank contamination studies, and New Hampshire and Massachusetts Phase I groundwater contamination studies. Miller Engineering, Inc. has completed several hydrogeologic and closure studies for municipal landfills in New Hampshire, and is currently involved in ongoing groundwater monitoring at each site. Miller Engineering, Inc. is capable of providing services necessary for a complete landfill closure project.

Our environmental testing equipment includes volatile organic compound detectors and a gas chromatograph designed for field operations. In addition, we have the ability to conduct a variety of geophysical surveys suitable for environmental and geotechnical studies. We can also provide a full range of groundwater and soil samples services.



Enclosed are resumes of principal personnel which will be assigned to this project.

We thank you for this opportunity to be of service to you. If all of the foregoing meets with your approval, we would appreciate your acknowledgement by signing the enclosed copy of this proposal and returning it to us for our files.

Very truly yours

MILLER ENGINEERING, INC.



Joseph M. Sobol, P.E.  
Senior Geotechnical Engineer

JMS:paz

Date: \_\_\_\_\_ For: \_\_\_\_\_  
(Company)

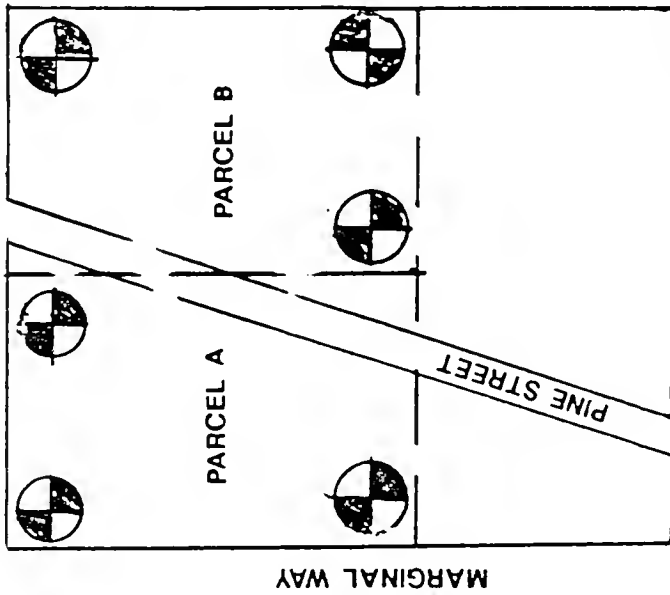
Accepted  
by: \_\_\_\_\_  
(Signature) (Address)

\_\_\_\_\_  
(Typed Name & Title)





WASHINGTON STREET



PARCEL A

PARCEL B

PARCEL C

OAK STREET

NASSAU STREET

PROPOSED BORING  
LOCATION

HARRISON AVE.

NOT TO SCALE

PROJECT : CHINATOWN PARCELS

A,B,&C

PROJECT No : \_\_\_\_\_

DATE : \_\_\_\_\_ AUGUST 31, 1989

PROPOSED BORING

LOCATION PLAN

MILLER ENGINEERING, INC.



RESUME OF: Arthur W. Rose, P.E.  
Vice President, Engineering  
Miller Engineering & Testing, Inc.

EDUCATION: Wentworth Institute, Boston, MA  
1958 - Associate Degree, Architectural Engineering

EXPERIENCE:

1981-1988 Vice President, Engineering  
Miller Engineering & Testing, Inc.  
Manchester, NH

1978-1981 Partner  
Rose, Goldberg, Mitsui & Associates  
Engineers and Architects  
Manchester, NH

1972-1978 President  
Rose, Goldberg & Associates  
Consulting Engineers  
Manchester, NH

1965-1972 General Manager  
Albert, Goldberg & Associates  
Consulting Engineers  
Manchester, NH

1960-1965 Design Engineer  
Albert, Goldberg & Associates  
Boston, MA

PROFESSIONAL

REGISTRATION: New Hampshire, Connecticut, Maine, Vermont,  
Massachusetts, Rhode Island, and Colorado

MEMBERSHIPS: National Society of Professional Engineers

American Arbitration Association  
Panel of Arbitrators

American Institute of Architects  
Professional Affiliate, NH Chapter

Construction Specifications Institute  
Charter Member - Past President, NH Chapter

Consulting Engineers of New Hampshire  
Charter Member, President, 1984 to 1986

Building Code Board of Appeals  
Goffstown, NH, Chairman



RESUME OF: David H. Foster  
Director of Environmental Services  
Miller Engineering, Inc.

EDUCATION: University of New Hampshire  
1976 - B.S. Geology/Hydrology

Duke University  
1977 - Graduate Studies: Marine Geology

U.S. Fish & Wildlife Service  
Instream Flow Incremental Methodology (IFIM)  
1983 - Courses in Scope and Design  
1984 - Field Methods

Massachusetts Institute of Technology  
1981 - Groundwater Hydrology, ASCE Short Course

1969 - U.S. Coast Guard Electronics School

EXPERIENCE: Mr. Foster has over 12 years of environmental consulting experience in the field of geological and hydrological investigations. His areas of expertise include dye studies, dispersion and transport phenomena, coastal engineering design criteria, beach and coastal sediment dynamics and geology.

1988 The Upjohn Company; Quinnipiac River (CT) Dispersion Study; Project Manager and Principal Investigator.

1988 Stearns and Wheeler Engineering; Seabrook (NH) Sewage Treatment Facility Environmental Studies; Project Manager and Principal Investigator.

1987 McComas Associates, Inc.; Badgers Island (ME) Geophysical Studies; Project Manager.

1987-1988 NH Department of Transportation, Conway Route 16 Project; Principal Investigator.

1985 Bechtel Civil and Minerals, Inc.; Schuylkill River (PA) Dispersion and Transport Studies; Project Manager. Managed and conducted dye dispersion and riverine transport study along a 40-mile reach of the Schuylkill River to assess impact of the Limerick Nuclear Power Stations thermal discharge on water quality.

1986 E.C. Jordan Engineers, Great Diamond Island (ME) Ocean Sewage Outfall Dispersion Study; Project Manager and Principal Investigator. Conducted investigations and prepared testimony in support of outfall location and determination of effluent dispersion patterns.



RESUME OF: David H. Foster (continued)

EXPERIENCE:

- 1986      The Sherburne Corp Wasteload Assimilation Studies and Water Quality Studies, Ottauquechee River (VT); Principal Investigator. Conducted investigations to determine wasteload assimilation capacity of the Ottauquechee River to accept secondarily treated effluent from a proposed discharge. Field studies included time-of-travel measurement and determination of reoxygenation rates using propane and dye injection techniques.
- 1985-1986      Central Maine Power Co.; Asiscohos Dam IFIM Studies (ME); Principal Investigator. Study involved aquatic and hydrologic assessment using Instream Flow Incremental Methodology (IFIM) modeling techniques for determination of a acceptable low flow releases from a hydroelectrical generating facility.
- 1985      Central Maine Power Co.; Hiram Instream Flow Studies (ME); Principal Investigator. Investigation of minimum flow release from hydroelectric facility included both application of IFIM modeling techniques for fisheries habitat assessment and hydrologic studies.
- 1984-1985      Hudson River (NY) PCB Reclamation Project; Project Manager. Surveyed PCB hot spots in Upper Hudson River for the New York State Department of Environmental Conservation to define the distribution of contaminated sediments to allow the development of plans for removing the most highly contaminated areas.
- 1982-1986      Sears Island (ME) Marine Cargo Terminal; Principal Investigator. Conducted geophysical, hydrographic and sedimentological investigations for engineering design criteria and environmental assessment of proposed major dry cargo facility.
- 1984      Hillsborough Mills (NH) Hydroelectric Project; Consulting Hydrologist. Determined instream flow needs and successfully negotiated a minimum flow requirement.
- 1981-1982      Lake Ontario (NY) Shoreline Protection Study; Project Manager. Managed a review of erosion conditions along the entire U.S. Lake Ontario shoreline for the U.S. Army Corps of Engineers. Historical aerial photography was used to document erosion/sedimentation trends over a 50-year period. Conceptual remedial measures were proposed.





RESUME OF: David H. Foster (continued)

EXPERIENCE:

- 1984 Androscoggin River (ME) Water Quality Modeling Study; Principal Investigator. Conducted sedimentological and water quality studies including determination of time-of-travel using fluorometric techniques as input to water quality modeling.
- 1983-1985 Great Northern Paper Company, Hydroelectric Development Project (ME); Principal Investigator. Conducted FERC Exhibit E environmental studies in support of major new dam construction and impoundment. Extensive field investigations included water quality, hydrologic, geological and aquatic habitat studies.
- 1983-1984 Signal Companies; Peat Wet-Harvesting; Principal Investigator. Performed extensive assessment of water quality impacts resulting from a proposed full-scale peat harvesting operation which included the creation of 500-acre harvest ponds and the discharge of treated effluent either back to the wetlands or into a salmon-populated river.
- 1983-1984 Towns of Falmouth and Bourne, MA. Megansett and Squeteague Harbor Dredge Assessment Studies; Project Manager. Precondition hydrographic survey, environmental impact assessment and preparation of permit documents.
- 1981 New Hampshire Port Authority; NH Recreational Boating Study; Project Manager. Geophysical and sedimentologic investigations of selected harbors for future harbor expansion feasibility.
- 1981 Dorchester SEA-3 Products (NH); Hydrographic and Pre- and Post-Dredging Condition Surveys; Project Manager.
- 1979 Brown and Root, Inc. Proposed Cape Charles (VA) Marine Fabrication Facility Basin and Access Channel Dredging Project; Principal Investigator. Hydrographic and sediment transfer studies for engineering design criteria.
- 1980 Whitman and Howard Engineers, Scarborough (ME) Ocean Sewage Outfall Hydrographic (Bathymetry and Current) Study; Scientific Investigator. Assessment of outfall location and determination of effluent dispersions pattern.
- 1978 City of Portland (ME) Peaks Island 301h EPA Application for Waiver of Secondary Sewage Treatment Facilities; Scientific Investigator. Physical oceanographic, water quality, effluent dilution and advective modeling to document waiver application.



RESUME OF: David H. Foster (continued)

EXPERIENCE:

- 1980-1982 Power Authority of State of New York Hydrothermal Survey at East River (NY); Principal Investigator. Dye dispersion, thermal plume mapping, infra-red overflights, water quality and hydrological measurements to satisfy NPDES permit requirements.
- 1983 Niagara Mohawk Power Corporation, Dunkirk Steam Station, Lake Erie, (NY) Hydrothermal Modeling; Scientific Investigator. Defined the thermal plume for a range of ambient conditions in order to satisfy NY SPDES Discharge Permit requirements.

EMPLOYMENT HISTORY:

- 1988 Miller Engineering, Inc.
- 1977-1988 Normandeau Associates, Inc.
- 1977 New Hampshire Extension Service

MEMBERSHIPS:

Society of Economic Paleontologists and Mineralogists  
Geological Society of America



RESUME OF: Frank K. Miller, Jr., P.E.  
Senior Geotechnical Engineer  
Miller Engineering, Inc.

EDUCATION: New England College  
1985 - B.S. Civil Engineering  
  
University of Lowell  
(in progress) - Geotechnical Engineering

EXPERIENCE:

1987-1988 Senior Geotechnical Engineer, Miller Engineering, Inc.,  
Manchester, NH.

Responsible for coordinating field and office engineering for numerous geotechnical investigations. Responsibilities include assessing the subsurface conditions observed through test explorations and making subsequent evaluations and recommendations for design. Also, on geotechnically unfavorable sites, have worked closely with owners, developers, and professional engineers to achieve feasible foundation solutions.

Have assisted consulting engineers, contractors, and State officials in qualifying earthen landfill liner and covers for many municipal and privately-owned landfills.

1985-1987 Senior Staff Engineer, Miller Engineering & Testing, Inc.,  
Manchester, NH

Responsible for directing field engineering for subsurface exploration programs. Also responsible for conducting several hydrological studies and making subsequent recommendations regarding the implementation of drainage schemes.

1983-1985 Staff Engineer, Miller Engineering & Testing, Inc.,  
Manchester, NH (Worked 30 hours per week while in school.)

Responsible for directing field work for subsurface exploration programs. Became heavily involved in the engineering interpretation of the subsurface conditions at many sites. These interpretations were used to generate geotechnical recommendations relative to construction. In addition, a fair amount of time was spent in a geotechnical engineering laboratory performing related tests.



RESUME OF: Frank K. Miller, Jr., P.E. (continued)

1981-1983 Quality Control Technician, Miller Engineering & Testing, Inc., Manchester, NH.

Responsible for performing a variety of quality control testing of several structural materials during the course of many construction projects. Further responsibilities consisted of monitoring and reporting all construction activity pertaining to the performance of related construction materials.

PROFESSIONAL  
REGISTRATIONS: New Hampshire

MEMBERSHIPS: 1985-Present: American Society for Civil Engineers  
Associate Member  
1982-1985: American Society for Civil Engineers  
Younger Member  
1984-1985: ASCE Student Chapter  
As student member, acted as treasurer

AWARDS: 1985 - Recipient of the William Weaver Scholarship





RESUME OF: Joseph M. Sobol, P.E.  
Senior Geotechnical Engineer  
Miller Engineering, Inc.

EDUCATION: Worcester Polytechnic Institute  
1981 - Civil Engineering  
  
Northeastern University  
(in progress) - M.S. Geotechnical Engineering

EXPERIENCE:

1987-1988 Senior Geotechnical Engineer, Miller Engineering, Inc.,  
Manchester, NH.

Responsible for direction of: field geotechnical engineering services, geotechnical/foundation reports, laboratory testing programs, and feasibility studies.

In addition, responsible for structural design, and preparation of plans and specifications for bridge and building foundations and small building superstructures.

1985-1987 Project Engineer, Hayden/Wegman, Inc., Consulting Engineers,  
Boston, MA.

Performed geotechnical and structural engineering and structural inspection of water treatment and various infrastructure projects.

Responsibilities included preparation of geotechnical engineering reports for Fox Point and Commercial Point CSO facilities, pile foundation design for CSO facilities and the Lynn, MA Commercial Fish Pier facility. In responsible charge of structural inspection, preparation of reports detailing recommendations and and cost estimates for structural rehabilitation of the Sullivan Square Interchange and several pedestrian bridges for the City of Boston.

1982-1985 Staff Engineer, Goodkind & O'dea, Inc. Consulting Engineers,  
Clifton, NJ.

Performed geotechnical engineering and structural design for several State highway projects in New Jersey (Routes I-195, I-287, and Route 522.) and various municipal projects.



RESUME OF: Joseph M. Sobol, P.E. (continued)

EXPERIENCE:

1932-1985  
(continued) Responsibilities included layout of subsurface exploration plans, field supervision, preparation of roadway and bridge foundation reports, structural design of abutments, walls and bridge decks, supervision of drafting, design of rock anchorage systems, and sheetpile walls.

1981-1982 Staff Engineer, Mueser, Rutledge, Johnston & DeSimone, Consulting Engineers, New York, NY.

Responsibilities included performance of comprehensive laboratory soils testing for such projects as Westway Highway, Washington Metro Subway and Fort McHenry Tunnel. Field Engineer for subsurface exploration programs at Battery Park City, and Fort McHenry Tunnel.

PROFESSIONAL

REGISTRATION: New Hampshire, No. 6890

MEMBERSHIPS: American Society of Civil Engineers, Member  
National Society of Professional Engineers, Member



RESUME OF: Steven W. Youngs  
Senior Hydrogeologist  
Miller Engineering, Inc.

EDUCATION: College of William and Mary  
1978 - B.S. Geology

Washington State University  
1981 - M.S. Structural Geology

University of Wisconsin  
1988 - M.S. Water Resources Management

EXPERIENCE:

1988  
to  
Present Senior Hydrogeologist, Miller Engineering, Inc.,  
Manchester, New Hampshire.

In position of Senior Hydrogeologist, was named as project manager or principal investigator to perform hydrogeologic field investigations, groundwater modeling, gas chromatography field analysis or storm water planning for the following partial list of projects:

- . Hydrogeologic Study of the Town of Goffstown Landfill, Pinardville, NH (Principal Investigator)
- . Hydrogeologic Study of the Town of Chester Landfill, Chester, NH (Principal Investigator)
- . Concord Waste Recovery Facility, Penacook, NH (Hydrogeologic Consultant)
- . Hydrocarbon Contamination Delineation Study, Derry Bank Property, Derry, NH, Gas Chromatography Field Studies (Project Manager)
- . Hydrocarbon and Solvent Waste Contamination Delineation Studies at PSNH Hillsboro Facility, Gas Chromatography Field Studies (Principal Investigator)
- . Storm Water Control Studies for Cooks' Corners Shopping Center in Brunswick, Maine; and Meadows Condominiums, in Freeport, Maine (Project Manager)
- . Environmental Site Assessment, Lowell Iron & Steel Property, Lowell, MA (Co-investigator and Hydrogeologic Consultant)



RESUME OF: Steven W. Youngs (continued)

EXPERIENCE: (continued)

1987  
to  
1988 Wisconsin Department of Natural Resources, Bureau  
of Fisheries Management and Bureau of Solid Waste  
Management.

. Wisconsin Landfill Monitoring Network Survey  
(Principal Investigator)

1983  
to  
1986 University of Wisconsin, Department of Geology and  
Chemistry

1980  
to  
1981 U.S. Forest Service, Nezperce National Forest, Idaho

1978  
to  
1980 Washington State University, Geology Department

MEMBERSHIPS: Society of Groundwater Scientists and Engineers.  
National Water Wall Association

ADDITIONAL  
STUDIES:

1989 OSHA 1910.120 40-hour Hazardous Waste Site Operations  
Course

1988 Photovac Gas Chromatograph Standard Operations and  
Methods Course.

1988 Hydrogeologic Field Methods, 3-Week Intensive Course,  
University of Wisconsin, Madison.

1983  
to  
1986 Course Work and Research Toward Ph.D., Economic Geology,  
University of Wisconsin, Madison. Research Topic:  
Geology of the Meme' Skarn, Haiti. Completed Chemistry  
Minor, including instrumental analysis methods.

1978 Geologic Field Camp, North Carolina State University,  
Summer Field Camp in New Mexico.





RESUME OF: Richard J. Eichhorn  
Geologist  
Miller Engineering, Inc.

EDUCATION: University of New Hampshire  
Major: Applied Geophysics  
1989 - M.S. Geology

Keene State College  
Major: Earth Science  
Minor: Physics  
1984 - B.S. Earth Science

EXPERIENCE:

1988 Geologist, Miller Engineering, Inc., Manchester, NH.

In position of Geologist, has had assignment of Project Manager or Principal investigator utilizing five years of experience in New England geological and geophysical studies; which include fracture trace analyses; magnetometer, resistivity and seismic surveys; and landfill closure and hazardous waste studies; in the following partial list of projects:

- . Town of Goffstown, Goffstown Landfill Hydrogeologic Study (Project Manager and Principal Investigator)
- . Town of Chester, Chester Landfill Hydrogeologic Study (Consulting Geologist)
- . Construction Consultants, Inc., Lowell Electric, Hazardous Waste Study (Consulting Geologist)
- . Southern New Hampshire Stone Quarry Site Feasibility Study (Consulting Geologist)
- . Bio Development, Lowell Iron & Steel, Hazardous Waste Study (Project Manager and Principal Investigator)
- . Riley Enterprises Inc., Fieldstone Plaze Foundation Design (Consulting Geologist)
- . Warner Cable Tower, MCI Tower, Contel Cellular, Inc. Tower, Merrimack Cellular One Tower (Consulting Geologist)

1987 D.L. Maher, Inc.

Conducted magnetometer surveys and fracture trace analyses for locating high-yield water wells for Blueberry Hill Country Club Water Supply (Geophysicist)



RESUME OF: Richard J. Eichhorn (continued)

EXPERIENCE: (continued)

1935 Mineral Management Service and the University of New  
to Hampshire  
1936

Organized and supervised cruises to collect seismic reflection data and core samples of off-shore glacial deposits. Developed detail computer-generated sediment contour maps.

MEMBERSHIPS:

American Geophysical Union  
Geological Society of America

ADDITIONAL  
STUDIES:

1936 Geophysical Study of Structures in the Nonesuch River Fault  
to Zone, Masters Thesis - Collected gravity and magnetic field  
1939 data. Generated computer models of subsurface geologic features.

1939 OSHA 1910.120 40-hour Hazardous Waste Site Operations Course

1938 Photovac 10S70 Gas Chromatograph Standard Operations and Methods Course

1934 Southeast Missouri State University, Geology Field Camp, Applied mapping techniques to areas of Utah, Arizona, and Nevada. Submitted weekly reports and maps.



RESUME OF: Bruce M. Linton  
Environmental Scientist  
Miller Engineering, Inc.

EDUCATION: Shippensburg University  
1986 - B.A. Mathematics with Computer  
Science Concentration

Shippensburg University  
1986 B.A. Geoenvironmental Studies

EXPERIENCE:

1988 Environmental Scientist, Miller Engineering, Inc.  
to Manchester, New Hampshire  
Present

Principle investigator for underground tank monitoring and mangement program. In addition, provides environmental consulting and support in the field of hydrological investigation and environmental site assessment as shown by the partial below:

- . Geohydrological Study, Town of Deerfield, NH (Scientific Field Investigator)
- . Geohydrological Investigation and Closure Plan, Town of Goffstown, NH (Scientific Field Investigator)
- . Environmental Site Assessment/Development of Remediation Program, One Stop Food Mart (Principle Investigator)
- . Geotechnical Foundation Study, Malden Mills (Principle Environmental Safety Officer)
- . Underground Storage Tank Monitoring Program, St. Ann's Nursing Home (Principle Investigator)
- . Underground Storage Tank Monitoring Program, St. Vincent De Paul Nursing Home (Principle Investigator)
- . Underground Storage Tank Monitoring Program, St. Mary's Church (Principle Investigator)
- . Environmental Site Assessment, Assumption Greek Orthodox Church (Principle Investigator)
- . Environmental Site Assessment, Kidder Bridge Associates (Principle Investigator)
- . Geohydrological Investigation and Environmental Site assessmant, Mallard Realty Group, Inc. (Principle Investigator)



- Geohydrological Investigation and Environmental Site Assessment, One Stop Food Marts, Inc. (Principle Investigator)
- Geohydrological Investigation. State Street Bank & Trust Co. (Principle Investigator)
- Underground Storage Tank Monitoring Program, New Hampshire College (Principle Investigator)
- Geohydrological Investigation and Environmental Site Assessment, Verani Realty Inc. (Principle Investigator)
- Environmental Site Assessment, Park & Royal Cleaners (Principle Investigator)
- Underground Storage Tank Monitoring Program, Public Service of New Hampshire (Principle Investigator)
- Underground Storage Tank Monitoring Program, St. Joseph's Regional School (Principle Investigator)
- Underground Storage Tank Monitoring Program, Diocese of Mancheser (Principle Investigator)
- Underground Storage Tank Monitoring Program, Franklin Regional Hospital (Principle Investigator)
- Geohydrological Investigation and Environmental Sites Assessment, Brooks Properties (Scientific Field Investigator)

1987  
to  
1988

State of Vermont

1986

Fox & Associates, Inc.

#### ADDITIONAL STUDIES:

Hazardous Waste Operation and Emergency Response;  
Certified in Compliance with 29 CFR 1910.120 - 1988

Underground Petroleum Storage Tank Management Workshop -  
1988

Graduate of Whale Research and Study Program, Stellerwagen  
Bank, Cape Cod, MA - 1984

Graduate of Field/Lab Oceanography Study Program, Wallops  
Island Marine Consortium, Wallops Island, VA - 1984





- . Geohydrological Investigation and Environmental Site Assessment, One Stop Food Marts, Inc. (Principle Investigator)
- . Geohydrological Investigation. State Street Bank & Trust Co. (Principle Investigator)
- . Underground Storage Tank Monitoring Program, New Hampshire College (Principle Investigator)
- . Geohydrological Investigation and Environmental Site Assessment, Verani Realty Inc. (Principle Investigator)
- . Environmental Site Assessment, Park & Royal Cleaners (Principle Investigator)
- . Underground Storage Tank Monitoring Program, Public Service of New Hampshire (Principle Investigator)
- . Underground Storage Tank Monitoring Program, St. Joseph's Regional School (Principle Investigator)
- . Underground Storage Tank Monitoring Program, Diocese of Mancheser (Principle Investigator)
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